

## REMARKS

Claims 41, 43-49 and 51-58 have been canceled without prejudice or disclaimer. Claims 59-86 have been added and therefore are pending in the present application. Claims 59-86 are supported throughout the specification, including the original claims. For example, the % sequence identities recited in claims 59-62, 71-74 and 79-82 are supported by, e.g., page 6, lines 16-28 of the specification; and the number of mutations recited in claims 59, 64-68, 71 and 79 are supported by, e.g., the exemplified variants at pages 15-26 of the specification.

The specification has been amended to update the status of the parent US application in the Cross-Reference to Related Applications section and to correct an obvious typographical error in the names of variants disclosed in the specification, specifically, the substitution Q373R has been corrected to Q374R.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

### **I. The Rejection of Claim 58 under 35 U.S.C. 112**

Claim 58 is rejected under 35 U.S.C. 112 as being indefinite. Specifically, the Office objected to the recitation of "A variant of an alpha-amylase comprising an amino acid sequence having at least 90% homology" because "it is unclear whether it is the variant or the parent alpha amylase that must have the limitations."

Claim 58 has been canceled without prejudice or disclaimer. Therefore, this rejection is rendered moot.

### **II. The Rejection of Claims 41, 43, 46-49 and 51-56 under 35 U.S.C. 102 and/or 103**

Claims 41 and 46-49 are rejected under 35 U.S.C. 102(e) as anticipated by, and claims 43 and 51-56 are rejected under 35 U.S.C. 103(a) as obvious over Andersen et al. (U.S. Application Publication No. 2003/0129718). Specifically, the Office Action states as follows:

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection ... may be overcome ... by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention 'by another....'

This rejection is respectfully traversed.

Applicants have previously submitted a Declaration of Carsten Andersen, one of the inventors of the instant application and a named inventor of the cited Andersen et al. application. In paragraph 4 of his Declaration, he explains that he is the sole inventor of the disclosure in the cited Andersen et al. application of variants of Termamyl-like alpha-amylases modified at a position corresponding to position 172 (using SP722 for numbering), which corresponds to position 170 (using SEQ ID NO: 8 for numbering).

In response to the Andersen Declaration, the Office stated that “this is not persuasive as Carsten Andersen is not the sole inventor of the instant application and thus the reference cited remains “by another”.

Applicants enclose herewith a petition to correct the inventorship of the subject application to name only Carsten Andersen as an inventor. Thus, this disclosure in the Andersen et al. reference is not the invention “by another”, as required by 35 U.S.C. 102(e) and Andersen et al. is not prior art.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 102 and 103. Applicants respectfully request reconsideration and withdrawal of the rejections.

### **III. The Rejection of Claims 41, 44, and 46-49 under 35 U.S.C. 102**

Claims 41, 44, and 46-49 are rejected under 35 U.S.C. 102(b) as anticipated by Borchert et al. (WO 99/23211). This rejection is respectfully traversed.

Borchert et al. disclose alpha-amylase variants modified at one or more positions, including position 172 (using SP722 amylase numbering), which corresponds to position 170 (using SEQ ID NO: 8 numbering in accordance with the present invention. Specifically, Borchert et al. disclose that the alpha-amylase may comprise a substitution at position 172 with A, D, R, N, C, E, G, H, I, L, K, M, F, P, S, T, W, Y or V (see page 4, line 21).

However, Borchert et al. do not disclose alpha-amylase variants comprising a substitution at position 170 with Q, as claimed herein.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 102. Applicants respectfully request reconsideration and withdrawal of the rejection.

### **IV. The Rejection of Claims 41, 44, and 46-49 under 35 U.S.C. 103**

Claims 41, 44, and 46-49 are rejected under 35 U.S.C. 103 as being unpatentable over Borchert et al. (WO 99/23211) in view of Andersen et al. (U.S. Patent No. 6,410,295). This rejection is respectfully traversed.

As discussed above, Borchert et al. disclose alpha-amylase variants comprising a substitution at position 170 (SEQ ID NO: 8 numbering) with A, D, R, N, C, E, G, H, I, L, K, M, F, P, S, T, W, Y or V (see page 4, line 21).

However, Borchert et al. do not teach or suggest alpha-amylase variants comprising a substitution at position 170 with Q, as claimed herein.

The Office relies on Andersen et al. (U.S. Patent No. 6,410,295) for their disclosure of alpha-amylase variants comprising a substitution of the amino acid at position 49 (SEQ ID NO: 8 numbering) with a different amino acid.

However, Andersen et al. (U.S. Patent No. 6,410,295) also do not teach or suggest alpha-amylase variants comprising a substitution at position 170 with Q.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 103. Applicants respectfully request reconsideration and withdrawal of the rejection.

#### **V. The Rejection of Claims 41, 43, 44, 46-49, and 51-56 under 35 U.S.C. 103**

Claims 41, 43, 44, 46-49, and 51-56 are rejected under 35 U.S.C. 103 as being unpatentable over Andersen et al. (U.S. Application Publication No. 2003/0129718) in view of Andersen et al. (U.S. Patent No. 6,410,295). This rejection is respectfully traversed.

As explained above, Andersen et al. (U.S. Application Publication No. 2003/0129718) is not prior art. Applicants therefore submit that this rejection has been overcome.

#### **VI. Conclusion**

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

All required fees were charged to Novozymes North America, Inc.'s Deposit Account No. 50-1701 at the time of electronic filing. The USPTO is authorized to charge this Deposit Account should any additional fees be due.

Respectfully submitted,

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/Elias Lambiris, Reg. # 33728/  
Elias J. Lambiris, Reg. No. 33,728  
Novozymes North America, Inc.  
500 Fifth Avenue, Suite 1600  
New York, NY 10110  
(212) 840-0097